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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,957	03/11/2004	Ian J. Forster	AVERP3415US	7720

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EXAMINER	
NGUYEN, HOANG V	
ART UNIT	**PAPER NUMBER**
2821	

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/798,957	FORSTER ET AL.	
	Examiner	Art Unit	
	Hoang V. Nguyen	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-53* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *15-25* is/are allowed.

6)☒ Claim(s) *1,26-28,32 and 37-53* is/are rejected.

7)☒ Claim(s) *2-14,29-31 and 33-36* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/21/04 & 10/1/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 47 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 47 recites the limitation "the portions" in line 1. There is insufficient antecedent basis for this limitation in the claim. Claim 45 only recites "a portion". Clarification/correction required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 6, 26-28, 32, 37-46 and 48-53 are rejected under 35 U.S.C. 102(e) as being anticipated by Endo et al (US 2004/0075616 A1).

Regarding claim 1, the antenna structure of Endo (para. 8) would enable the method comprising identifying a low-current-flow portion of an antenna layout proposed for the antenna

structure; and placing a high effective resistance region in the low-current-flow portion, and low effective resistance regions in other portions of the antenna layout.

Regarding claim 26, Endo (Figures 1-2, para 8) discloses an RFID device comprising a substrate 11; an antenna structure 14 on the substrate, wherein the antenna structure having a regular shape, wherein the antenna structure includes a low effective resistance region 14b; and a high effective resistance region 14a having an electrical conductivity less than that of the low effective resistance; and an RFID strap 13 operative coupled to the antenna structure.

Regarding claims 27 and 28, Figure 7 of Endo show that the antenna element 14a having a polygonal or rectangular shape.

Regarding claim 32, as applied to claim 26, Endo (para. 8) teaches that the low effective resistance region is thicker than the high effective resistance region.

Regarding claim 37, as applied to claim 26, Endo (para. 9) teaches that the low effective resistance region includes conductive ink.

Regarding claim 38, as applied to claim 26, Endo (para. 9) teaches that the low effective resistance region includes plated conductive material.

Regarding claim 39, the antenna structure of Endo (para. 8) would enable the method comprising the steps of selecting an initial antenna structure layout, wherein the initial antenna structure layout includes a conductive element of conductive material, wherein the conductive element has a regular shape; and changing the effective resistance of a portion of the conductive element.

Regarding claim 40, as applied to claim 39, Endo (para. 8) teaches that the step of changing includes removing substantially all of the conductive material from the portion.

Regarding claim 41, as applied to claim 39, Endo (para. 8) teaches that the step of changing includes thinning the conductive material in the portion.

Regarding claim 42, as applied to claim 39, Endo (para. 8) teaches that the step of changing includes configuring the conductive element to have a low effective resistance portion and a high effective resistance portion.

Regarding claims 43 and 44, as applied to claim 39, Endo (para. 8) teaches that the portion is a portion of the initial antenna structure layout where low current flow is expected, relative to other part of the conductive element; and wherein the changing step includes increasing effective resistance in the portion, wherein the portion is substantially fully surrounded by other portions of the conductive element.

Regarding claim 45, the antenna structure of Endo (Figures 1-2, para. 8) would enable the method comprising the steps of selecting an initial antenna structure layout, wherein the initial antenna structure layout includes a conductive element of conductive material; and modifying a portion of the conductive element initial antenna structure layout to produce a modified antenna structure layout having a reduced cost associated therewith.

Regarding claim 46, as applied to claim 45, Endo (Figure 1) shows that the conductive element 14 has a regular shape.

Regarding claim 47, as applied to claim 45, Figure 1 of Endo shows that the portion 14b is substantially surrounded by other parts 14a of the conductive element.

Regarding claim 48, as applied to claim 45, Endo (para. 8) teaches that the step of modifying includes removing substantially all of the conductive material from the portion.

Regarding claim 49, as applied to claim 45, Endo (para. 8) teaches that the step of modifying includes thinning the conductive material in the portion.

Regarding claim 50, as applied to claim 45, Endo (para. 8) teaches that the step of modifying includes changing the conductive material of the portion.

Regarding claim 51, as applied to claim 45, Endo (para. 8) teaches that the step of modifying includes changin the effective resistance of the portion.

Regarding claims 52 and 53, as applied to claim 45, Endo (para. 8) would teach the step of simulating performance of the initial antenna structure layout; wherein the modifying includes selecting the portion based on results of the simulating; and wherein the selecting includes selecting based on current flow in the initial antenna structure layout predicted by the simulating.

Allowable Subject Matter

5. Claims 2-14, 29-31 and 33-36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 15-25 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 2, Endo fails to further teach, among other features, the step of identifying includes numerically simulating performance of the antenna layout.

Claims 3-5, 12 and 13 would have been found allowable for being dependent on claim 2.

Regarding claim 6, Endo fails to specifically teach, among other features, that the placing includes placing the low effective resistance regions so as to substantially fully surround the high effective resistance region.

Regarding claim 7, Endo fails to specifically teach, among other features, that the low effective resistance regions are thicker than the high effective resistance region.

Regarding claim 8, Endo fails to specifically teach, among other features, that the low effective resistance regions have an uneven thickness.

Regarding claims 9-11, Endo fails to specifically teach, among other features, that the low effective resistance regions have a stacked structure, with a pair of conductive layers separated in part from one another by an intervening insulator layer.

Regarding claim 14, Endo fails to specifically teach, among other features, that the high effective resistance regions are free of conductive material.

Regarding claim 15, Endo discloses an RFID device comprising a substrate; an antenna structure on the substrate, wherein the antenna structure includes a low effective resistance region; and a high effective resistance region having an electrical conductivity less than that of the low effective resistance; and an RFID strap operative coupled to the antenna structure. Endo, however, fails to specifically teach that the low effective resistance region substantially fully surrounds the high effective resistance region.

Claims 16-25 are allowed for depending on claim 15.

Regarding claim 29, Endo fails to specifically teach, among other features, that the high effective resistance region is located such that, if high effective resistance region had the same

conductivity as the low effective resistance region, the high effective resistance region would have a lower current flow than the low effective resistance region.

Regarding claim 30, Endo fails to specifically teach, among other features, that the high effective resistance region includes at least about 10% of the antenna layout.

Regarding claim 31, Endo fails to specifically teach, among other features, that the high effective resistance region is substantially of conductive material.

Regarding claim 32, Endo fails to specifically teach, among other features, that the low effective resistance region is thicker than the high effective resistance region.

Regarding claim 33, Endo fails to specifically teach, among other features, that the low effective resistance region has an uneven thickness.

Regarding claims 34-36, Endo fails to specifically teach, among other features, that the low effective resistance regions have a stacked structure, with a pair of conductive layers separated in part from one another by an intervening insulator layer.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patent 6,830,193 discloses an RFID antenna structure arrangement having a reduce cost associated therewith.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang V. Nguyen whose telephone number is (571) 272-1825. The examiner can normally be reached on Mondays-Fridays from 9:00 a.m. to 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoang Nguyen can be reached on (571) 272-1825. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hvn
9/16/05

HOANG V. NGUYEN
PRIMARY EXAMINER